ON THE

SPONTANEOUS AND ARTIFICIAL DELIVERY OF THE CHILD IN

FACE PRESENTATIONS,

WITH THE CHIN POSTERIORLY.

BY

ISAAC E. TAYLOR, M. D.,

EMERITUS PROFESSOR OF OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK, ATTENDING PHYSICIAN TO THE BELLEVUE AND THE CHARITY HOSPITALS, ETC.

[*REPRINTED FROM THE N. Y. MEDICAL JOURNAL, NOV.*, 1869.]

NEW YORK:
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SPONTANEOUS AND ARTIFICIAL DELIVERY OF THE CHILD IN FACE PRESENTATIONS.

Mr. President: I purpose this evening offering a few practical remarks on the subject of mento-posterior frank presentations of the face, and their treatment; and more especially when the face rests in the cavity of the pelvis.

I do not refer to mento-sacral positions, because I have never met with a case, nor have I ever noticed a case of cranial presentation in that position. Until very lately, I may say until Madame Lachapelle gave more character and force to the opinion that face presentations were natural, the practical idea was, that it was *improper* and incorrect to trust the delivery to the natural resources, and that every attempt should be made to reduce the presentation to a normal one. Paul Portal, in 1685, gave currency to the opinion that "there is no more difficulty (in these face cases) than in natural ones, although it may be a more protracted delivery." Deleurye adopted Portal's suggestion, and affirmed that "when the face presents, such delivery terminates naturally, though somewhat longer, without the operation of art." Deventer, who considered delivery possible in such presentations, does not the less endeavor to prevent them, and Smellie records that "they should be terminated by version—the forceps, and even the crotchet." This opinion is also entertained by Cazeaux, Chailly, Hodge, Bedford, and Lachapelle herself, provided the chin,

[1] This paper was read before the New York Medical Journal Association, June 18, 1869.

if *posteriorly* presenting, does not rotate *anteriorly*. Baudelocque, Gardien, and Maygrier, consider they may be delivered naturally, but counsel a change of the presentation.

The general impression of the medical mind at the present day is, that cases of face presentation should be "let alone" —left to Nature, whether the chin of the child presents anteriorly or *posteriorly*. In actual practice, Tyler Smith observes, the treatment is perfectly simple. By some, face presentations are considered less dangerous and more simple than breech cases. It is certainly true that there is no reason why face cases should not terminate naturally, if the chin is anterior or posterior, provided there is no mechanical defect. If we consult experience, and consider the diameter of the child's head and the pelvis of the woman, the delivery of face presentations is as favorable and nearly as safe as the vertex cases.

I remarked above that face cases were regarded as natural, provided the chin shall present anteriorly, or, if posterior, should rotate anteriorly. Should, however, the chin not rotate, the case presents a different aspect, and this is the point upon which I desire to offer a few observations.

Cazeaux has remarked that "they [mento-posterior cases] are at term one of the most difficult in the obstetric art to treat."

Chailly: "This is impossible to be delivered unless the face should change its position anteriorly."

Hodge: "In truth the child must surely perish, and craniotomy be performed if the child is dead."

Churchill: "The older writers describe the head as emerging from the lower outlet, in face presentations, with the chin posteriorly. A moment's consideration will show that this is an *impossibility mechanically*."

Capuron and Mesnard have endeavored to prove on geometrical principles that delivery by the face in any position is impossible without artificial aid.

Velpeau, who entertains favorable views respecting the internal mechanism of the face in the pelvis, says: "The posterior position of the face I consider *impossible*, for the chin, which must always appear first at the vulva, to descend in this atti-

tude as far as the anterior edge of the perinæum, unless, as Desormeaux remarks, the fœtus be an abortion, for the breast would then be entirely within the pelvis at the same time as the head."

Murphy: "They are very rarely met with."

Naegele, Jr., the principal authority who has moulded the obstetric mind of the profession since the publication of his essay on the "Mechanism of Parturition," observes: "The chin always turns itself, in the course of labor, forward under the arch of the pubes, that is to say, if no faulty condition exists, for example in respect of room, or if no external reason for changing the position of the head has led to an attempt to rectify it by converting it into a cranial one, or to have recourse to artificial delivery. In an obstetric practice of thirty-six years, a case never occurred to my father, if no mechanical interference became necessary, where the forehead turned forward and the face placed itself in the usual and opposite direction of the outlet. An immature or untimely fœtus may readily place itself during labor in any conceivable position in the pelvis. But, as an example, the expulsion of the face, with the forehead directed forward as a rule, as is stated in many compendia, is perfectly absurd, and depends either on the author having seen too small a number of labors before writing thus, or, among other things, such a representation owes its existence to the desire of contradiction; and further, they speak in such a tone as if they would make one believe these pieces of jugglery and rope-dancing were of daily occurrence, but to which Nature never surrenders herself."

I have quoted from these various authors the views which they entertain on this important subject. To assert with those to whom Naegele refers, that the mento-posterior positions are common with the child born with the chin posteriorly, would be very wide of the fact, and would claim a denial from almost all obstetricians at the present day. As well might the author of this paper assert, after equally as long a public and private experience, and in a very large number of instrumental obstetrical cases, because he has *never seen a case of occipito-posterior* cranial presentation terminate as such, either naturally or artificially, that therefore it is perfectly absurd, and it is what "Na-

ture never surrenders herself to." The author has carefully watched these occipito-posterior cranial presentations, and he has in several instances noticed that, while the head was on the verge of being born, rotation speedily ensued, and the labor was terminated with the occiput anteriorly.

I do not propose considering the causes, diagnosis, or prognosis of these cases, as it would occupy too much time of the members of this association.

In face presentations, more than any other presentation of the fœtal ovoid, there is a greater discrepancy of opinion, not only as regards the *position* of the child, but also of the mechanism of the labor, and especially with respect to the *treatment* in the mento-posterior positions.

Positions.—The positions of the face are generally regarded as transverse. The right and left mento-iliac, therefore, are the two positions. Chailly, Hodge, and Bedford, make four positions, and Tyler Smith speaks of four, but recognizes only two as occurring in practice, viz., with the forehead to the right or left acetabulum. Cazeaux considers the transverse more frequent than the right-posterior, which he says is erroneous. Tyler Smith, Chailly, and Dubois, with whom my own experience coincides, make the mento-posterior the most frequent, and Tyler Smith entirely ignores the mento-anterior. On the contrary, the chin placed anteriorly is by some considered the most usual. Gardien, Deleurye, and Stein, admit them as very common, and Stein considers the mento-sacral as the best of all. According to Cazeaux, in his investigations on this subject, he was unable to find recorded more than three cases of frank mento-sacral positions, and I should confirm this point. They are those of Smellie, De la Motte, and Meza. In Smellie's case the child was smaller than usual, and the pelvis was large. In Meza's case it was necessary to apply the forceps. De la Motte says nothing as regards the size of the child or the mother's pelvis.

Flexion is recognized as the normal condition of the child, *in utero*, not only as respects the head being flexed on the chest, but all its members are flexed, and the face when it presents is therefore a *reversed* presentationof the vertex. Now, if we consider the ordinary or general course of presentations

of the head, as generally laid down, and by none more decidedly so than by Naegele himself, we shall have the two most frequent cases, whether primitive or secondary, of the mento-posterior presentations, the first in frequency, and the second, with the chin anteriorly to the acetabulum. I have not been able to verify the opinion of those obstetricians who make the transverse position of the face the most frequent. If we consider the pelvis of the mother covered by the soft structures, especially in the positions which the psoas-magnus and iliacus-internus muscles occupy, the transverse diameter is diminished by fully one inch from the dry pelvis, and therefore the oblique diameter becomes the largest; as the mento-frontal diameter is not any longer than the occipito-bregmatic, the usual position when the child's head is flexed, yet the head will occupy the long diameter. I have seen but two cases in the transverse position in the superior strait, and one of them this year in a lady with her second labor. The face presented fairly in this direction, and the child, weighing five pounds, was delivered transversely in two pains. Lachapelle states that she has also witnessed the same circumstance. The positions I have usually found are: 1. The mento-posterior position with the chin to the right sacro-iliac synchondrosis. 2. The chin anteriorly to the left acetabulum, the reverse of the first. There were twenty-seven cases of the first, fifteen of the second, and two transverse—forty-four cases in all. In one case there were twins, both face presentations.

The child therefore presents itself in the oblique position in the superior strait, passes down obliquely into the cavity of the pelvis, and is born, most generally, in the oblique diameter at the ostium vaginæ; for, out of one hundred and twenty-five cases of cranial presentations, which I have marked by nitrate of silver on the vertex to test the obliquity of the child when born, one hundred and five were oblique, the rest antero-posterior, and this is the view entertained by Naegele of the oblique position of the head, and assented to by others. The face follows the same law. Lachapelle, Tyler Smith, and Chailly, admit the greater frequency of the mento-posterior positions. I am not surprised that Roederer, Stein, Smellie, and some of the older obstetricians, should speak of the anterior

position as being the most frequent, not only at the entrance of the pelvis, but at the vulva, for they were not conversant with the mechanism of parturition as it is understood at the present day. I agree fully with the views advanced by the authorities quoted above; but, to assert that mento-posterior positions of face presentations delivered with the chin posteriorly are impossible and at variance withfacts, I shall endeavor to show are contrary to the truth. Even if this position of the face is not frequent, there is no mechanical or obstetrical reason why the mento-posterior face presentations, even in ordinary cases, should not terminate spontaneously, and that artificial aid can deliver the child without craniotomy, except in very unusual cases.

Treatment.—The different methods adopted at the present day are the following:

1. Relying upon nature to effect the delivery either by rotation of the chin anteriorly, or by cephalic version in the pelvis changing the face into a natural presentation.

2. Artificial cephalic version before the face has engaged in the superior strait. This comprises both internal version and version by external manipulation.

3. Podalic version.

4. Artificial rotation—*a*, by the hand or fingers; *b*, by the vectis, or by the right-angled blunt hook; *c*, by the long curved forceps acting as rotators and tractors.

5. Craniotomy—but before the performance of craniotomy I propose,

6. Division of the perinæum laterally, and afterward the use of the *straight* forceps instead of the curved.

On each of these several propositions I desire to suggest a word or two. No one at the present day doubts that face cases are not delivered as naturally as cranial presentations. The only doubt existing in the mind of the profession is, that but very few cases require instrumental or artificial aid, and the opinion of the highest authorities is that mento-posterior positions are not even delivered naturally when the face occupies the excavation, unless nature may effect the rotation of the chin forward. Previously I have shown that the mento-posterior positions of the face are the most frequent, and that the

face is oblique. That Nature, in a large proportion of cases, accomplishes her object by rotating the chin anteriorly as readily as she does in the occipito-posterior cases. Cazeaux has asserted that rotation must and does take place before the child's face has reached the floor of the inferior strait, as the neck of the child will not admit of extension low enough in the pelvis, on account of the chest not being able to enter the pelvis with the occiput pressed into the posterior part of the neck or between the shoulders. Tyler Smith considers that rotation is always accomplished, principally when the chin reaches the ischiatic spine. Should rotation not occur at this period of labor when the face reaches the inferior strait, it is deemed an impossibility for the child to be born in that position if the chin points either directly to the sacrum, or obliquely toward one of the sacro-iliac synchondroses. For my own part I do not consider there is any reason why this class of cases should be so perfectly ignored and considered as impossible or absurd, nor why craniotomy must be resorted to more than in occipito-posterior positions when the child is born with the forehead front and the chin escapes under the pubes, or that these occipito-posterior cases may become face cases just as the child is being born. Boivin has seen one case of this nature, Bedford another, and Moreau claims two cases. I cannot forget a case of this nature where the forehead of the child was pressing upon the pubes and the pelvis of the mother was ample, as the head of the child was resting in the pelvis low down, and before the cervix became dilated. After complete dilatation the forehead was pressing under the lower part of the pubes, and it seemed then it would be too late for rotation to occur, as every pain appeared only to wedge the head more perfectly in the excavation, but in a few minutes the child was extruded, complete rotation having taken place with the occiput anteriorly. On the contrary, I have never seen a case where the occiput was posterior, and was delivered in this manner either naturally or artificially, which is a rather unusual experience. Is Nature to be ignored? Certainly not. Who has not seen, and that too very unexpectedly in shoulder presentations, when the shoulder is dipping deep into the pelvis, and it would appear to be utterly

impossible for the child to be born unless evisceration were performed, the shoulder become more firmly fixed than ever, and spontaneous evolution taking place, and the child delivered in a few minutes by the breech? My impression is that the views of Naegele and some others have allowed the ordinary measurements of the child's head to square with the usual measurements of the pelvis of the woman. They have thus, in a great degree, set aside the spontaneous delivery of the child in face presentations with the chin posteriorly, and if not rotating round, and the forceps should not succeed, resort to craniotomy. There is no member, I believe, of this association, of even the most limited practice, who has not seen cases of ample pelvis and small children—large children with ordinary pelvis. If we take the usual diameters of the child's head, in the flexed and in the extended positions, we shall find that, even in the ordinary measurements of the female pelvis, they are nearly or exactly the same—rather less in the face than in the vertex.

Face.		Occiput.	
Mento-frontal,	3 inches.	Sub-occipito-frontal,	3¼ inches.
Trachelo-frontal,	3⅛ inches.	Sub-occipito-bregmatic,	3⅛ inches.
Trachelo-bregmatic,	3¼ inches.	Biparietal,	3¼ inches.
Trachelo-occipito,	3¾ to 4 in.		

It is not, however, in these diameters that the difficulty exists, but in the measurements of the child's head when it is deflected by the occiput coming in contact with the posterior part of the neck. It is frequently stated between the shoulders, but that appears to be very difficult to occur, as the length of the anterior part of the neck will only measure 3 to 4 inches, and the posterior part of the occiput, from the upper portion of the neck to the end of the occiput, will measure 1½ to 2 inches at the most. The depth between the anterior part of the apex of the chest and the external part of the occiput, the sterno-occipital diameter, will measure from 4¾ to 5 inches. In twenty-one cases, which I have measured, the proportion was as follows: In three cases, 5¾ inches; in five cases, 5½ inches; in two, 3¼ inches; in eight, 5 inches; in one, 4¾ inches. The weights of the children were from six to ten pounds. Burns is the only authority, I believe, who has the measurements ap-

plied to these cases, and the sterno-occipital diameter, according to him, is 4¾ inches. Comparing this diameter of the child's head and chest with the capacity of the pelvis, even in ordinary pelves, we shall perceive there is as much space for the face and the upper part of the thorax to enter the pelvis as we should have in large heads or well-ossified cranial presentations. It is not alone in the diameters of the child's head or pelvis of the woman, as it is in the ample pelvis we sometimes meet with—not solely in the entrance, but the outlet. We see this in short-statured women, and also the direction of the pubes, its slanting more outwardly, and shorter, and in the divergence of the pubic rami, and the depth of the pelvis and a straight coccyx. The soft structures claim an important consideration. The relaxation of the soft parts, the shortness of the perinæum in primiparæ, or its rupture in multiparæ. On the part of the child, there is a want of proper ossification of the cranial bones—the fontanelle is large, the bones easily overlapping—for, if it were not for the moulding of the bones in tedious cranial cases, the child would not be delivered in many cases without artificial assistance. Another difficulty sometimes appears to exist and makes the case more tedious in vertex presentations, which is the circumference with which the head enters the pelvis, and in the unusual relations which the peculiar position of the fœtus induces. The head of the fœtus, when born by the vertex, is lengthened in the longest or diagonal diameter, that is, from the chin to the vertex; the vertex is the highest point toward which the roof of the skull forms a gradually inclined plane from the forehead. The diagonal diameter surpasses ordinarily the straight one from forehead to vertex one inch, so that the two diameters form two lines which, when the head is looked at in profile, makes an irregular triangle.

The occiput of a child born in face presentations appears drawn out or lengthened solely in the direction of the straight diameter; the roof is but slightly arched, being quite flat, and ends in a sharper angle at the forehead. The difference between the straight and diagonal diameters disappears, and the two lines drawn from forehead to vertex, and from chin to vertex, form nearly an isosceles triangle. The head from the

arching of the roof and occiput toward the side of the pelvis which it presents, to being straighter than the posterior part of the pelvis which is concave, obstructs the descent, and through protracted uterine contraction the neck is more stretched, and the occiput approaches the back. The skull is flattened and the head has in this manner lost its height, its vertical diameter has decreased, and so finds room in the pelvis, and by further uterine contraction passes into the excavation, and the rotation is effected even if the forehead with the anterior fontanelle presents, and, as it were, on the point of being delivered.

In thirty-two cases I find, where measurements have been made in the Prague hospital, the straight diameter was larger than the diagonal in *two* cases. In twelve cases, equal to it. In thirteen, *shorter* by one-fourth inch. In three, *shorter* by one-half inch. In one, *shorter* by one inch—that is, the straight diameter, which usually measures one inch less than the diagonal, was lengthened one inch. This certainly is not as great a compression in face cases as some children undergo in occipital presentations, measuring, as I have seen, from six to eight inches in length, two to three inches beyond the usual measurement. The experience and views of Cazeaux, therefore, cannot be accepted that the child in face presentations can only enter the pelvis as far as the length of the neck will admit, and as he denies that this condition of the chin entering with the back part of the head cannot be realized, and therefore he considers that rotation can only take place in the superior strait.

On this point of rotation I will cite a case or two:

Case I.—*Face Presentation; mento-posterior position; delivery by Nature.*

Mrs. Kennedy (April, 1850), multipara, whom I had attended in a previous labor with a child weighing eleven pounds, was taken in labor about 9 A. M., with active pains. I saw her a short time afterward, and found, on examination, the os uteri amply dilated. Face presentation, chin posteriorly to the right sacro-iliac synchondrosis; face dipping well down into the pelvis. Another pain brought the chin down on the perinæum in the oblique diameter; a second pain, and it appeared as if every moment the face would pass externally with the chin posteriorly. The anterior fontanelle was felt at the opening of the vulva; vertex much compressed. While waiting for the face to be born in this unusual position, the head almost instantly ro-

tated round, and the chin pointed to the opposite side of the pelvis—the right acetabulum. Another pain, and the child was delivered with the chin anteriorly under the right pubic ramus. Child weighed ten pounds, and was alive.

CASE II.—*Face Presentation; mento-posterior position; delivery by natural powers. Dr. Hicks, Obstet. Trans.*

Mrs. W., aged nineteen, primipara; rather a small and delicate person; pelvis normal; had been in labor twenty-four hours when I saw her. The os was well dilated, the membranes ruptured, and the face descended full into the cavity, when the uterus became quiescent. The chin was directed posteriorly toward the right side of the sacrum. As the pains had gone off for some time, secale cornutum was administered. The pains returned, and an endeavor was made to bring the chin more anteriorly, but without effect, yet it was observed to descend as rapidly as in mento-anterior positions. In a short time the forehead separated the vulva beneath the pubic arch, the chin and face gliding down nearly over the sacrum and inside of the perinæum until the nose was just clearing the anterior margin. While watching the effects of Nature, which appeared so little more effort to accomplish delivery in the original direction, the chin rotated forward toward the tuberosity of the right ischium up into the arch of the pelvis, and the child was delivered with the chin anteriorly. The child was alive, and of average size.

Braun, in the *Monatschrift für Geburtshülfe*, February, 1861, "On a rare Mechanism in Face Presentation," describes a case in which a mature child, presenting by the face with the chin on the perinæum, was delivered by the natural powers in this position. After the birth of the head the back of the child remained directed forward. The child was born dead.

Dr. Hodge has also referred to a case where the slightest pressure of the finger on the chin, though the head was low down in the pelvis, caused the chin to rotate anteriorly.

Smellie, in 1748, says: "I was called to a woman in labor, by a midwife, who told me she found the opening of the child's head below the share bones and with the forehead to that point. On examination, I plainly distinguished the face and the chin backward at the coccyx. In two pains more the face and forehead passed toward the posterior part in the form of a large tumor; the perinæum and fundament were greatly lengthened and the vertex and occiput slipped out from under the pubes; the face and forehead turned up from the perinæum, and the woman was delivered of a small child."

In Braun's case the face was delivered posteriorly over

the perinæum—that of Smellie from under the pubes, showing that even in this position the child may be born, and therefore delivery is not an *impossibility*. The vulva may be lengthened immensely—as I have seen in a case of double monster, where the whole back presented, and yet no rupture occurred—fully six and a half inches, as was verified by my friend Dr. Stone. The case of Braun shows that the opinion as laid down by Guillemot proved correct, who says the forehead may continue to descend and to engage under the arch of the pubes, until the anterior fontanelle appears at the vulva and reaches the border of the perinæum, then the process of extension commences.

The presentation by the face may be converted into one by the vertex. Velpeau remarks that the forehead engages behind the body of the symphysis pubis, while the chin gets below the sacro-vertebral angle. The whole head descends into the excavation beyond the anterior fontanelle from the anterior plane, and the face drags after it the front surface of the neck, and *even* the *upper part* of the chest. The occipito-mental diameter, which still represents very nearly the axis of the strait, now begins to perform a *see-saw* movement from above downward and from behind forward. The chin penetrates farther and farther to the bottom of the excavation, though at the same time retained by the thorax, which cannot advance, forces the sagittal suture to slip down behind the pubes, and the forehead to gain the upper part of the inferior strait. The frontal protuberance soon finds a point of resistance on the perinæum, and the posterior fontanelle descends in turn, and ultimately appears at the summit of the arch as in occipito-anterior positions. Guillemot attested to the same view. Merriman has also asserted that he has seen two cases, where the chin was placed posteriorly, converted into occipito-anterior natural positions. Although Guillemot and Velpeau give the manner in which these cases may be changed into a different one, yet they do not cite any cases. There appears to be no valid reason, from the experiences adduced, independently of the theories advanced, why these should not exist. Should we, for this reason, on account of the rarity of face cases with the chin posteriorly, and the delivery of the child with the oc-

ciput anteriorly, as also with the chin posteriorly, and as well when occipito-posterior cases are converted into face cases, say that it is an absurdity and a piece of jugglery on the part of Nature? My experience tells me the contrary. The flexion of the face internally, by a spontaneous movement, and the delivery of the chin posteriorly on the perinæum, have and do suggest the delivery by artificial means, as much as the artificial means are suggested by the operation of rotation of the chin anteriorly, or when the chin is posteriorly.

Cazeaux admits the possibility of spontaneous cephalic version. Hodge deems it practicable, though he has not seen a case. He sees no reason why the head may not be made to rotate when it has descended into the pelvis between the superior and inferior straits. Meigs considers it impossible; Chailly, that flexion cannot be accomplished unless there should be a diminution in the diameters of the head or an increase in those of the pelvis. Burns remarks, it is easier for the forehead to turn down in these mento-posterior cases at the arch than for the chin to descend behind, and we find that it may move up along the bottom of the sacrum, and in the same proportion the forehead reaches backward and the vertex comes down and passes under the arch. This will explain how face have sometimes been converted into natural presentations.

It is apparent (the opinion of Naegele and others to the contrary notwithstanding), that *spontaneous delivery* is not an impossibility in mento-sacral or mento-posterior cases, when the head is in the excavation, and that it is not more unusual than occipito-posterior cases are converted into face cases, and the chin delivered under the pubes. The practical lesson, therefore, we should learn from these cases is, how Nature tries to effect her object, and study the method of artificial delivery suited according to circumstances.

2. *Cephalic Version.*—I have attempted it several times, and although I have accomplished the flexion (I speak of primitive cases) while the face is in the superior strait, or still within the cervix, I have never yet seen a case where it retained its flexed position, for it would always return to the normal extended position.

3. *Podalic Version.*—I leave this division of my subject,

for the few remarks I have to make on it, till the close of this paper.

4. *Artificial rotation:* in the first, the hand or fingers; second, the vectis, or, as I prefer, the right-angle blunt-hook for rotation or flexion; third, by the curved forceps by rotation, or by traction, or by both, at the same time. Should rotation not be effected by the finger or hand, or the vectis or right-angle blunt-hook, the application of the forceps is deemed absolutely necessary. I have said nothing respecting the vectis in attempting to flex the head in these unfavorable positions, because I consider it would require much time, and probably do severe injury to the soft structures of the mother; as the posterior part of the head or occiput is fully one inch above the pubic rami, to reach that point there would necessarily have to be great traction made, and pressure on the pelvic brim. The injury, I conceive, would be very considerable. If Nature has not fulfilled this part of her mission, I do not think it could be accomplished by the vectis.

Respecting the treatment of these cases by the long curved forceps, there is a very wide difference. As it is a very important part of the subject under consideration, a few moments' dwelling upon it may not be misapplied. There is not only a difference regarding the *kind* of forceps, but the direction of the traction for the delivery of the child, and the method of their application in the different positions anteriorly and posteriorly. This instrument is considered useful and necessary in two ways: first, as rotators; and, second, as tractors. As rotators they have been advised, but much apprehension has been experienced in twisting the child's neck too far. No doubt, in the hands of those who have not been accustomed to manipulations with these instruments, such fears might be entertained. The different views held as to when the application of the forceps is to be made are entirely at variance with each other, and with the first principles of the mechanism of parturition so ably laid down by some of these authorities themselves. Cazeaux applies them with the intention of flexing the head, and converting the face presentation into a vertex. To accomplish this, the blades are to be placed on the sides of the head, and, in operating, the handles

should be depressed as far backward as possible, so as to act chiefly on the vertex until the occiput is brought down under the pubic arch. Chailly, without enlarging much upon the subject, says: "The instruments are to be applied transversely or diagonally, and finally two *successive applications* will become absolutely indispensable if we desire to bring in front the chin, which is quite posteriorly. The first application must be made as diagonally as possible, in order to bring the chin *transversely*; the second application is made in the same direction, conducting it under the pubes, and, increasing slightly the movement of rotation, the delivery is achieved." Chailly prefers this method in preference to disengaging the head in the direct mento-posterior positions, as he considers they only endanger the life of the child by the torsion of the neck. There is no doubt that the energetic efforts, which are often long continued, while they contuse and lacerate the parts of the mother on which the vertex and chin have rested for a considerable time, cause also a rupture of the perinæum more or less extensive. This rupture may extend to the rectum, and the accident may not only endanger the life of the mother, but expose her to infirmities which strike at her very moral existence. While Chailly counsels the application of the long curved forceps in the diagonal position, Hodge says the forceps would be unwarrantable when the head (i. e., face) is oblique. If the head is transverse, if the anterior rotation cannot be effected in these mento-posterior positions of the face, version by the vertex should be attempted within the pelvis—the same opinion as Cazeaux. My old preceptor, Dr. Dewees, wrote thus: "Should the forceps be determined on, we must apply them over the ears, one blade behind the pubes, and the other before the sacrum; and they must be so applied that the concave edges must look toward the *hind*-head, which must be brought under the arch of the pubes and not the chin." Von Helly says: "At the brim, the double-curved forceps must be applied in the transverse direction, one blade on the *forehead* and *crown*, the other on the face."

From these views there could not be a greater variety of opinions, and a greater complexity respecting the management of face cases (the mento-posterior), by instrumental de-

livery. Scarcely two authorities agree. Dubois, Danyan, Cazeaux, and others, have failed as they say in rotating the face round, and Smellie himself was often unable to succeed. Blot has succeeded by rotating round the chin in three or four instances, and others have certainly done the same. It appears the most natural and feasible of all the methods which have been recommended.

Natural version in the pelvis is rare, and therefore the possibility is greater, if not less practicable than the former method. The last method of all is the flexing the head by the curved forceps, with traction downward, and delivering the child, if possible, before craniotomy is resorted to. By the diagrams, one of which is taken from Chailly, and another from Hodge, and one of my own showing, the position of the forceps as applied, and the direction of the traction necessary, Chailly differs entirely from Cazeaux respecting the flexion of the child, and considers it about impossible. He says: "I would proceed by a movement of elevation and direct traction, until the chin should be directed toward one of the sacro-sciatic ligaments, by inclining the forceps to the side. By a movement of depression, and repulsion posteriorly, I would disengage, gradually, the occiput from the pubes, the chin pushing the perinæum backward and downward; then, with the aid of a slight direct traction, I would deliver the face, which remains fixed on the perinæum." Delivery, however, in this way, he says, is dangerous to both mother and child.

The plan suggested by Dr. Dewees would, inevitably, if successful, bring the top of the forehead and the crown of the head underneath the arch, and the chin to the sacrum and coccyx. The views of Dr. Dewees are opposed to the first principles of the application of the forceps in this class of cases. I must agree with Dr. Meigs that it must have been a *lapsus pennæ*, and not a precept that he would have adopted in practice. Madame Lachapelle, when the face of the child is in the excavation, prefers, instead of applying the forceps, to lift the head out of the cavity of the pelvis, and perform version. "If, by chance," she observes, "a circumstance which my experience causes me to regard as impossible, I should find the chin turned backward even toward the sacrum, and the infant was pre-

sumed to be living, I believe I should make every effort to reach the feet, even if the head were in the lower part of the excavation, and had passed the uterine orifice."

After all this had been accomplished, and the rotation either by the hand, vectis, or forceps, either by rotation or traction, are we prepared to say that *craniotomy* alone remains, as this is the *next* procedure recommended to be adopted as the *dernier ressort?* To obviate this unfortunate step, I now pass to the last division of the different points I have presented for consideration, which is the *division* of the perinæum laterally on the side to which the chin is directed.

Previous to entering on this point, I will report some cases showing that, with the chin posteriorly, by the aid of the forceps it is possible for the child to be born without resorting to craniotomy, independently of the measure I adopt.

Case I.—Smellie. The woman had been long in labor; chin presenting to the lower part of the sacrum a little to the left side, and obliquely (this case is generally quoted as being a directly antero-posterior or mento-sacral position). The face was so low down as to protrude the soft parts of the woman in the form of a tumor; pains much weakened. I introduced the forceps as in a former case, but, finding it impossible to raise the head, I was obliged to pull it along during the time of every pain—as it presented. The parts between the coccyx and os externum were gradually extended by the face and forehead of the child, and at last yielded so as to allow the vertex to come out from between the pubes.

Case II.—Dr. Hicks, in the *Obstetrical Transactions*, etc., vol. vii., page 64, relates the following:

Mrs. ——, of Rotherhithe, aged 40, multipara. Former labors quick and easy. Had been in labor eighteen hours when Dr. H. saw her. The forehead was anterior, rather lower than the chin, which was pointing directly to the sacrum; head well down in the pelvis. As she was becoming wearied and exhausted, I applied the forceps and endeavored to improve the position of the head. This could not be accomplished. The instruments frequently slipped, and were as often reapplied. The forceps were removed, and slight rotation by the fingers adopted—the chin to the left side of the sacrum, and oblique.

I then reapplied the forceps, and finding it useless to endeavor any further to bring the chin anteriorly, I drew down the chin over the sacrum and perinæum, and, without any very great trouble, succeeded in bringing it just outside the perinæum; immediately after this, the upper part of the head glided underneath the pubes, and the delivery was quickly over. Child alive, and exactly resembled the head of the child in Smellie's plate.

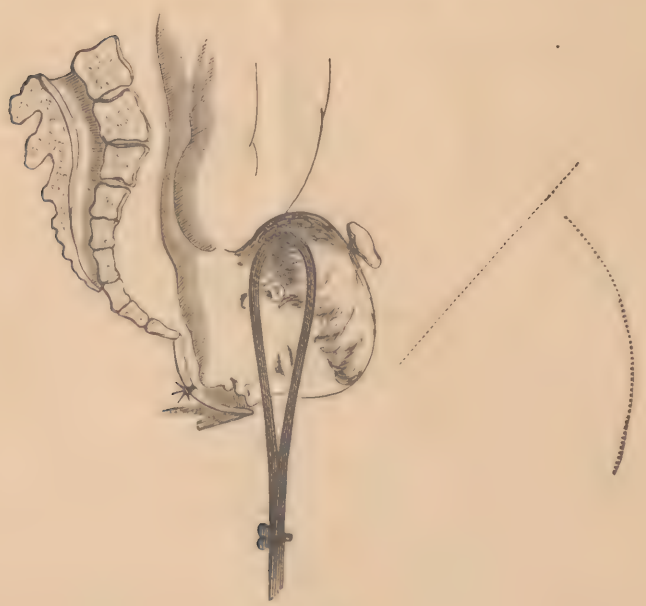
Case III.—Professor Braun, of Vienna, reports a like case. The delivery was effected by the forceps. The root of the nose first became visible; the chin passed over the perinæum, then the calvarium and occiput came under the symphisis in completely transformed mechanism—child alive.

When, unfortunately, all these means should have failed, and when, as Von Helly remarks, auscultation declares that the child is alive, nothing but accidents threatening the mother can justify even the tentative application of the forceps; and now as soon as the conviction is obtained that further force is dangerous to the mother, perforation is indicated, and especially demanded for the safety of the mother. The operation is easy, and the temptation, as Hodge remarks, is strong to terminate the labor. But it is possible the child may be *living*, provided the labor has not long continued. Even under these circumstances, Metternauer, and Von Helly, and some others, agree in favor of perforation when the child may be still alive, rather than wait until the lives of both mother and child are imperilled. If these are the opinions entertained when the chin of the child is anteriorly, how much greater the difficulty when the chin is posteriorly and the efforts unavailing!

As a substitute for craniotomy, therefore, even before the patient has become exhausted, and obeying the imperative law which experience has demonstrated, that every hour after twenty-four hours' delay in the delivery of the mother under adverse symptoms imperils her welfare and tends to sacrifice her life and the life of her child, I consider it imperative to avoid *craniotomy* and endeavor to save the mother much earlier than is usually done. I propose, as I stated above, *division of the perinæum laterally*. The operation has, in some instances, been suggested on account of the large size of the

child's head, and for a lengthened perinæum when laceration is inevitable. It is true the cases demanding this operation were not ordinary, and so are cases of face presentation of the nature under consideration. Michaelis recommended it, and Siebold approved it in vertex presentations with large heads and elongation of the perinæum. Ritgen took the same view, but never performed it either in hospital or private practice. Blundell advocated and practised only slight incisions, which were to be made laterally, and done during a pain. Paul Dubois divided the perinæum when necessary, directing the oblique incision. Chailly coincides, of course, with the suggestion of M. Dubois. Busch thinks that these incisions should be confined to cases of organic anomalies only. It is admitted that the cases are rare, which would demand such an operation, but the rarity of the especial cases under consideration shows the merit of the operation and claims the performance of it, not only for the sake of the child, but also for the mother. The objection of some, that the incision once started may soon be converted into a tear extending even to the anus, is futile. On the contrary, it is to avoid this deplorable issue of producing vesico- and recto-vaginal fistulæ, and the laceration of the whole anus. The lateral incisions remove the dangers that are impending for the mother if the forceps be used, as Smellie has asserted in some of his cases. Should embryotomy be performed, the difficulties attending delivery and threatening the welfare of the mother, after the operation, would be much greater than from the simple perineal section. At the present time we know there is no difficulty in the perfect restoration of the parts as soon *after* delivery as may be convenient or practicable. The chances of success would be much greater than after the forced laceration of the anus and the complete division of the sphincter muscle. The fear that there will be too much laceration need not be entertained. The length of the division will, in some measure, correspond to the depth of the child's head in the excavation, which will be nearly the same as the length of the vertex which is against the pubes, from one and a half to two inches.

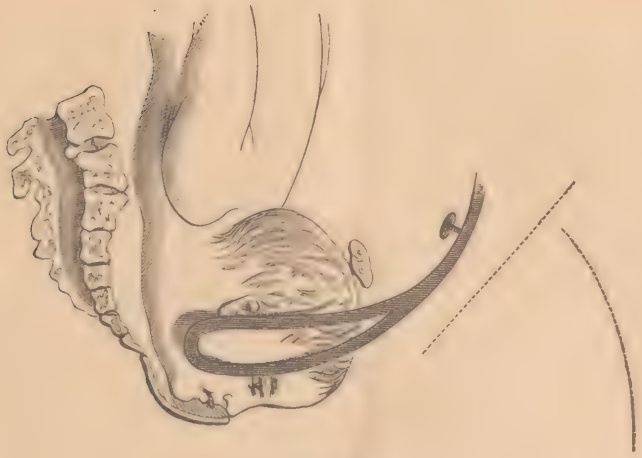
Should the natural powers of the uterus not accomplish the delivery, after the division, then I should apply the long



TAYLOR.

straight forceps—instead of the curved—extending them from the forehead of the child to the occiput along the straight diameter of the head. Traction should be made directly downward, to free the child from its position, as shown by the diagram. I have suggested the use of the straight forceps in preference to the curved, more especially in these mento-posterior positions, because they are to be used not only as tractors, but as rotators. They are more easily applied, and the direction of the traction is in consonance with the descent of the head, as we have seen when the child is delivered naturally. It would be almost an impossibility to deliver by the common forceps, as proposed by Chailly, Hodge, and others, in the direction of Carus's curve. In mento-anterior positions the long curved forceps can be applied without difficulty, and, as soon as the child's chin is delivered, the direction of the traction must be in that of the inferior strait.

Before drawing my remarks to a close, I wish to say a few words respecting podalic version, as generally recommended in these cases. Madame Lachapelle recommends it even when



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the child's head is in the cavity of the pelvis or low down; she prefers it to the forceps, if the head can be raised up and the feet reached. Hodge approves of the same procedure. Bedford gives his sanction to it when the head is in the superior strait. Chailly is of the same opinion as Madame Lachapelle; while Tyler Smith would ignore it as much as possible. Burns is quite emphatic that it ought never to be done if there is no urgent reason for it; it is dangerous to the mother, and peculiarly so to the child. I certainly would avoid version, if it be possible, as Nature is fully competent, in a large number of cases, to effect her own purposes, no matter what position may obtain. I further believe that there are some cases which may have been originally posterior positions, and which, not being seen by the physician until low down in the pelvis, have become anterior chin presentations. I could not, however, partake of the opinion of Burns respecting version, for there are instances where, even in the first stages of labor, in primitive face cases, version must be resorted to. Only lately I have been obliged to deliver by turning in a face case with the chin anteriorly. The patient was a lady pregnant for the first time after being married seventeen years. I first saw her at 3 A. M. The labor was natural; os uteri dilated to the size of a shilling. The waters had been evacuated about two hours previously. Pains active, and appeared to be effective. There was no decided impediment until 10 o'clock. The face did not impinge as much on the os uteri as it should have done. At this time the pains were still active, but the patient becoming wearied and exhausted, and the pains were now beginning to flag. My friend Dr. Burral being near, was requested to be present, and administer the anæsthetic while I should effect version. There was no more prospect, at 11½ A. M., of the case being terminated naturally than at 10. The os uteri at this time was dilated to the size of a quarter-dollar. Version was resorted to, and the child delivered apparently dead. After a short time it was resuscitated, and did well. While turning, no pulsation could be felt in the cord.

I will now relate two cases where the mento-posterior position existed, and where delivery by the method I have suggested was resorted to:

CASE I.—*Mento-posterior position; delivery by division of the perinæum; child dead.*

December, 1848. A dispensary patient of my friend Dr. W. J. McNeven. Multipara; labor existed for twenty-eight hours. Head in the excavation and low down; right side of the face presenting obliquely. Anterior fontanelle perceptible to the touch, although small from compression; the nose a short distance above the fourchette. Perinæum considerably on the stretch. Pains feeble, and had been so for some time. Although the head was so unfavorably placed, still it appeared that the child might be delivered. The temptation was very great to divide the perinæum. Recollecting the remark of Dr. George Bush, in his work on Diseases of the Rectum, about dividing the perinæum in elongated perinei in tedious labor, I was prompted to propose the suggestion to my friend Dr. McNeven, as presenting the best chances for the termination of the labor. The suggestion was accepted, and the perinæum incised laterally on the right side, avoiding in this manner the rectum. In a short time the child was delivered. The incision was not more than an inch or an inch and a quarter in length, quite sufficient to answer the purpose. The child was dead, as had been recognized previously.

Remarks.—When I proposed this method, I was not as well informed, from reading and experience, as at the present time. In truth, I may say I knew but very little respecting these rare cases and their special management. It was so perfectly suggestive and successful, that I have ever acted on that principle in this kind of cases. Every thing in regard to the case tended to the accomplishment of this course of treatment.

In 1853, a second case came under my notice, in a patient in East Seventeenth Street, who was attended by Dr. Sawyer, of the house-staff, Bellevue Hospital, and a student. In this case the same condition of labor presented, but the labor did not terminate as favorably after the division of the perinæum, by the natural powers of the uterus. The long straight forceps were applied, and the child delivered. The infant in this case also was dead when I saw it.

The cause of the death of the child in these unfavorable cases lies in the compression which the skull and brain undergo, and in the obstruction to the circulation by the lessening of the calibre of the vessels of the neck, from the great stretching of the neck. *Post-mortem* investigations have discovered no more congestion of the brain than in ordinary cra-

nial cases. No injury of the spine has been found to have occurred.

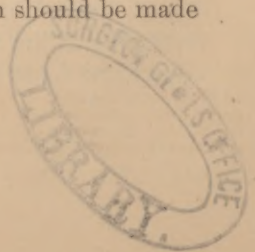
I will not tax your patience, Mr. President, and gentlemen of the Association, much longer. Sufficient has been adduced to illustrate not only the very great difference of opinions respecting the management of this class of cases, differences in regard to the position of the child—the spontaneous delivery of the same—the method of the application of the forceps, and delivery by the same—the mechanism of the child's head in the pelvis and also by version, and finally by craniotomy. The experience of the last twenty-five or thirty years seems to negative the opinions expressed by the authorities I have quoted, and shows that the views and positive opinions of Naegele (the father) are not correct—that Nature does sometimes surrender herself to the spontaneous delivery of the child, accompanied with blessings of the mother, and the gratitude and admiration of the mechanism of Nature by the accoucheur. I will conclude my remarks by the following propositions:

1. That mento-posterior positions of the face are the most frequent; that spontaneous delivery may be accomplished as easily, readily, and safely, as in mento-anterior cases; that rotation of the chin forward to the pubes can occur even though the face has descended into the excavation, and sometimes just as the child appears to be born.

2. That these cases may be delivered spontaneously—by cephalic version in the pelvis, and by the passing also of the child's face over the perinæum, the chin appearing first. In other cases, the occiput may emerge from under the pubes *first*.

3. That if rotation of the chin anteriorly cannot be accomplished naturally, nor by artificial resources, I propose first the *division of the perinæum laterally*, on whichever side the chin presents, and before craniotomy is performed.

4. That should the natural powers of the uterus not effect delivery even after division of the perinæum, the application of the long *straight* forceps should be resorted to in preference to the curved, and the direction of the traction should be made directly downward and backward.



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